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Precious and Worthless: A Comparative Perspective on Loot Boxes and Gambling

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Precious and Worthless: A Comparative Perspective on Loot Boxes and Gambling

Andrew V. Moshirnia*

Abstract

Odds-based microtransactions in video games, or “loot boxes,” offer users a chance to get special game items for actual money (i.e., legal tender), as opposed to acquiring this “loot” through in-game achievements. This feature provides revenue for game developers and allows users to acquire items that would otherwise require hours of gameplay. But loot boxes threaten to degrade game design and foist addictive mechanics on vulnerable users. Loot-box purchasers, much like pathological gamblers placing a wager, report an initial rush when opening a loot box and then a wave of regret and shame. This problem is especially acute in underage consumers who spend thousands of dollars to gain a desired item. Governments are aware of this disturbing trend and are attempting to regulate or outright ban the practice.

Present attempts to constrain game developers are predicated on a finding that selling random virtual items is in fact gambling. That approach is flawed. Loot boxes are unlikely to meet the legal requirements of gambling on account of two factors: users are guaranteed to receive at least one item and all items offered have no tangible value. Moreover, prohibiting the practice may encourage political actors to further censor video games, a popular scapegoat following school shootings and other tragic events. While loot boxes may not constitute gambling, the troublingly opaque nature of loot box odds warrants

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intervention. Accordingly, this Essay offers a novel dual-pronged transparency-based solution that avoids an outright ban on the activity. First, the odds of obtaining specific loot should be disclosed to consumers. Second, regulators should require game developers to rate such games as appropriate for adults, not children.

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INTRODUCTION

Video games have often revolved around the collection of seemingly randomly appearing treasure. Slay the dragon and it may drop a useful item, or “loot.” In these gaming ecosystems, players often slay reappearing enemies (“grinding” or “farming”) in the hope that they will stumble upon an upgraded weapon or piece of armor.¹ However, developers have created shortcuts to avoid the tedium of grinding by allowing game players to purchase the best items with real money.² In-game purchases, so-called “microtransactions,” represent a vital revenue stream to game publishers in the face of stagnant game pricing.³ Yet, player frustration with microtransactions is well documented.⁴ In-game items held behind a paywall may disturb competitive balance, creating a “pay-to-win” game.⁵ Moreover, game

1. See Patrick Klepek, *I Hate Grinding, But I Can't Stop in 'Monster Hunter: World'*, VICE WAYPOINT (Feb. 15, 2018, 10:00 AM), https://waypoint.vice.com/en_us/article/d3wywa/i-hate-grinding-but-i-cant-stop-in-monster-hunter-world (describing grinding as addictive and meaningful and noting “I’m here for the loot drops, buddy!”); TheHotterPotato, *It Takes 40 Hours to Unlock a Hero. Spreadsheet and Galactic Assault Statistics*, REDDIT (Nov. 10, 2017, 10:09:13 PM), https://www.reddit.com/r/StarWarsBattlefront/comments/7c6bjm/it_takes_40_hours_to_unlock_a_hero_spreadsheet/ (documenting a spreadsheet of how long grinding takes to unlock rewards in a game).

2. See *generally In-game Purchases*, INTERACTIVE SOFTWARE FED’N OF EUR., <https://www.isfe.eu/objectives/public-policy/in-game-purchases> (last visited Jan. 16, 2019).

3. See Prateek Agarwal, *Economics of Microtransactions in Video Games*, INTELLIGENT ECONOMIST (Dec. 20, 2017), <https://www.intelligenteconomist.com/economics-of-microtransactions/> (explaining that microtransaction is a monetary solution for developers to “the hesitancy from consumers to spend money in the App Store”).

4. See Trevor Ruben, *Why Microtransaction and Loot Boxes Are Destroying Games*, VARIETY (Oct. 13, 2017), <https://variety.com/2017/gaming/news/loot-boxes-destroying-games-1203048432/> (“Microtransactions hurt the entire industry by bending to breakage the one thing that every market needs: honest, comparative judgment between products.”).

5. See Carter Dotson, *Why Pay-to-Win is a Flawed Concept*, TOUCHARCADE (Feb. 25, 2016), <http://toucharcade.com/2016/02/25/why-pay-to-win-is-a-flawed-concept-the-carter-crater/> (outlining the pay-to-win concept and characterizing most modern games with the mechanic as “pay-to-compete”).

designers may deliberately create tedious gameplay mechanics in order to incentivize shortcut purchases.⁶

Direct sales of in-game items are not the only way to accomplish after-sale revenue from in-game play. Adding another level of gaming and chance, developers may sell “loot boxes,” which contain a smattering of random items.⁷ Users purchase the loot box, which often guarantees a certain level of rare items, hoping to gain a desired item, game feature, or player costume.⁸ Despite the poor reception of the mechanic from consumers,⁹ loot boxes continue to proliferate, in part because they generate large amounts of profit from a comparatively small user base.¹⁰ Users, usually below the age of eighteen,¹¹

6. See Pete Davison, *Dungeon Keeper: A Symptom of a Wider Problem*, US GAMER (Feb. 3, 2014), <https://www.usgamer.net/articles/dungeon-keeper-a-symptom-of-a-wider-problem> (noting unfortunate game design of *Dungeon Keeper*, a game widely ridiculed for its debasement of the original *Dungeon Keeper* game and inclusion of microtransactions); see also Agarwal, *supra* note 3 (“Game studios are now purposefully designing bad systems and mechanics, hoping that people will be willing to pay to get past the poorly-made parts of the service.”).

7. See Jason M. Bailey, *A Video Game ‘Loot Box’ Offers Coveted Rewards, but Is It Gambling?*, N.Y. TIMES (Apr. 24, 2018), <https://www.nytimes.com/2018/04/24/business/loot-boxes-video-games.html> (describing that a player spent \$300 on *Overwatch* loot boxes after playing the game for more than 800 hours and that another player spent \$900 on items that are only available for a limited time).

8. Virtual items that change the appearance of in-game avatars, weapons, and equipment are commonly referred to as skins. See Desirée Martinelli, *Skin Gambling: Have We Found the Millennial Goldmine or Imminent Trouble?*, 21 GAMING L. R. 557, 558 (2017).

9. See Joel Hruska, *Most Gamers Hate Buying Loot Boxes, So Why Are Games Using Them?*, EXTREMETECH (Oct. 13, 2017, 1:02 PM), <https://www.extremetech.com/gaming/257387-gamers-hate-buying-loot-boxes-games-using>.

10. See Agarwal, *supra* note 3 (finding that only 0.15 percent of mobile gamers account for 50 percent of all in-game revenue); Paul Tassi, *In Pursuit of ‘Hearthstone’ Whales, Blizzard Will Drain the Ocean*, FORBES (Nov. 10, 2017), <https://www.forbes.com/sites/insertcoin/2017/11/10/in-pursuit-of-hearthstone-whales-blizzard-will-drain-the-ocean/#2088aba13b5a> (noting the extreme lengths developers will go to recruit whales).

11. The targeting of children for in-app purchases is a well-documented practice. See, e.g., Marisa Meyer et al., *Advertising in Young Children’s Apps*, 40 J. DEVELOPMENTAL & BEHAV. PEDIATRICS 32 (2019).

have described themselves as addicted to loot boxes, spending thousands of dollars in the pursuit of better items.¹²

The legal difficulty of this game design arises from the fact that while loot boxes seem to offer gambling mechanics to vulnerable underage users, the practice of selling loot boxes does

12. See Kellen Beck, *After Spending \$10,000 on Microtransactions, a Gambling Addicted Teen Speaks Out*, MASHABLE (Dec. 1, 2017), <https://mashable.com/2017/12/01/19-gaming-gambling-addict/#u5qDpBsONkq> (reporting that receipts from 2015 and 2016 showed a 19-year old “spent around \$10,000 on video game content, ranging from \$0.99 to \$100 on games like *Clash of Kings*, *Counter-Strike: Global Offensive*, *Hobbit: Kingdom of Middle-earth*, *Pokémon Go*, and more”); Ellen McGrody, *For Many Players, Lootboxes Are a Crisis That’s Already Here*, VICE WAYPOINT (Jan. 30, 2018, 1:08 PM), https://waypoint.vice.com/en_us/article/kznmwa/for-many-players-lootboxes-are-a-crisis-thats-already-here (recounting stories of addicts, including individuals who considered suicide: “I ended up calling a suicide hotline that night. I felt distraught, pathetic, that I had just blown so much money on nothing but virtual jewels. I felt like I deserved to die for letting it get so bad and for wasting this much money.”); see also Jamal4137, *Personal Experiences With Loot Box Addiction*, REDDIT (Nov. 15, 2017, 1:50:54 PM), https://www.reddit.com/r/truегaming/comments/7d6oif/personal_experiences_with_loot_box_addiction/ (prompting multiple users to confess to spending thousands on microtransactions, with one user noting “[t]hankfully this loot box craze started well after I learned my lesson about the dangers of turning real life currency into in-game items”); Nothing024, *A Whale of a Tale*, REDDIT (Dec. 13, 2017, 3:14:31 PM), https://www.reddit.com/r/FFBraveExvius/comments/7jmezv/a_whale_of_a_tale (“I became a gambling addict over a game where there is no return, no reward, for spending my money. I Flushed \$16,000 down the toilet over a game.”).

not squarely fit within today's gambling laws.¹³ Although users can gain virtual "loot," they do not gain cash or tangible prizes.¹⁴

This essay is the first to document the current loot-box trend in video games and suggest a transparency-based solution using existing infrastructure. Part I provides specific case studies of the current loot-box trend. Part II notes the domestic and international responses to that trend. Part III proposes a domestic, transparency-focused solution based on odds disclosure and the existing rating system that the Entertainment Software Rating Board (ESRB) adopted in a bid to evade greater regulation. Part IV highlights difficulties attendant to an industry-based solution and areas for further study.

I. LOOT BOXES—BACKGROUND

While loot boxes have existed for many years, the general public may be unaware of the mechanisms and prevalence of this gameplay practice.¹⁵ This section provides an overview of the market forces that allowed the practice to spread, the psychological and market research attendant to various gambling-like loot box mechanics, the reactions of the game-

13. Existing gaming laws are a poor fit for loot boxes in that game designers may argue that won items are "virtual items" without any tangible worth. See also MODEL ANTI-GAMBLING ACT § 2 cmt. at 12 (NAT'L CONFERENCE OF COMM'RS ON UNIF. STATE LAWS 1952), http://www.gambling-law-us.com/State-Laws/Anti-Gambling_Act.pdf (explaining that the word winning always implies a game or wager, and is intended to include the direct favorable outcome of a play or bet). Compare *Mason v. Mach. Zone, Inc.*, 851 F.3d 315, 319 (4th Cir. 2017) (holding that virtual items were not money and were not redeemable for money), and *Soto v. Sky Union*, 159 F. Supp. 3d 871 (N.D. Ill. 2016) (agreeing with game developers that virtual skins do not constitute money or another thing of value under various state anti-gambling statutes), with *Phillips v. Double Down Interactive, LLC*, 173 F. Supp. 3d 731, 739–40 (N.D. Ill. 2016) (holding that game developers were not winners because they did not directly participate in games and thus the plaintiffs cannot recover their losses). But cf. *Kater v. Churchill Downs, Inc.*, 886 F.3d 784, 787 (9th Cir. 2018) (holding that virtual chips used to play games and rewarded for winning games in virtual casino qualified as a "thing of value" under Washington law).

14. See *Martinelli*, *supra* note 8, at 564 (finding that "the prizes and tokens in the games did not have any tangible worth, leading to the conclusion that 'virtual gaming operators with virtual prizes are legal'").

15. See *Bailey*, *supra* note 7 ("Loot boxes have been prevalent for at least a decade, mostly in free games, but the Battlefront controversy was 'the first real big punch in the gut.'").

playing public, industry case studies, and the response of major industry actors.

A. GAME DESIGN AND MOTIVATING FORCES

The rise of microtransactions in full price games has been ascribed to the development of microtransactions in mobile games,¹⁶ as well as to the stagnant pricing in the video game market generally.¹⁷

Freemium gaming, in which users may download free-to-play games that offer other purchasable content, has been primarily focused on mobile devices.¹⁸ Mobile app games generate \$34.8 billion USD worldwide.¹⁹ While a full review of the development of freemium games is outside the scope of this essay, it is important to realize that the practice is ubiquitous. At the time of this writing, 149 of the top 150 grossing iPhone games are free to install (with *Minecraft*, at the fifty-fourth position, representing the sole exception).²⁰ The important figure here is “install-to-purchase” percentage which measures the percentage of users who actually spend after installing the game.²¹ Industry publications point to rates that vary from a high of 12.02 percent for card game players to a low of 3.52 percent for action adventure game players.²²

As the great majority of users will not be in-app purchasers, the goal is to recruit “whales”—the high-spending minority of

16. See Mike Williams, *The Harsh History of Gaming Microtransactions: From Horse Armor to Loot Boxes*, US GAMER (Oct. 11, 2017), <https://www.usgamer.net/articles/the-history-of-gaming-microtransactions-from-horse-armor-to-loot-boxes> (“Major developers and publishers have adopted the [loot box] model before and since [the release and success of *Overwatch* in 2016].”).

17. See Agarwal, *supra* note 3, and accompanying text.

18. See Will Fulton, *Freemium Game Developer Reveals the Dirty Truths Behind In-App Purchases*, DIGITAL TRENDS (Sept. 18, 2015, 4:10 PM), <https://www.digitaltrends.com/gaming/freemium-games-exposed/>.

19. See LIFTOFF, MOBILE GAMING APPS REPORT 4 (2017), https://cdn2.hubspot.net/hubfs/434414/Reports/2017%20Gaming%20Report/Liftoff_Mobile_Gaming_Apps_Report.pdf.

20. See *Top Grossing iPhone—Games*, THINK GAMING, <https://thinkgaming.com/app-sales-data/?page=1> (last visited Nov. 12, 2018).

21. See LIFTOFF, *supra* note 19, at 5 (highlighting that the overall install-to-purchase rate for gaming apps is higher than average when compared to other app categories).

22. See *id.* at 19.

users that generate the bulk of profit in these games.²³ The Electronic Entertainment Design and Research group estimates that heavy users (defined as “[w]hale[s who] spent over \$100 in the past year”) in the North American market make up only 7 percent of mobile game players but represent 55 percent of revenue.²⁴ As one developer put it, “[e]ach time, every new project became less and less about how we can do cool things, and more about how we can track and target users to get the most whales possible, boost chart position and retain users to shove as many ads on them as possible.”²⁵

Though the cost of development of AAA titles for both consoles and personal computers has skyrocketed,²⁶ the maximum sticker price for a game remains approximately \$60 USD.²⁷ Video game budgets have grown from around two million dollars in 1995 to more than fifty million dollars in 2014.²⁸

23. See Fulton, *supra* note 18.

24. EEDAR, DECONSTRUCTING MOBILE & TABLET GAMING 19 (2016), <http://www.eedar.com/sites/default/files/EEDAR%20-Mobile%20Report%202016%20-%20Whitepaper.pdf> (“Despite their small player base (which has grown somewhat—from 5% in 2015—but remains low at 7%), Heavy Payers continue to contribute over half of the mobile gaming revenue (55%).”).

25. Eli Hodapp, “We Own You”—*Confessions of an Anonymous Free to Play Producer*, TOUCHARCADE (Sept. 16, 2015), <http://toucharcade.com/2015/09/16/we-own-you-confessions-of-a-free-to-play-producer/>.

26. See Kshosfy, *As Mobile Games Rise, Studios Fear for Blockbusters’ Future*, WIRED (Feb. 15, 2011), <https://www.wired.com/2011/02/dice-blockbuster-games/>.

27. See Erik Kain, *Video Games Should Be More Expensive*, FORBES (Apr. 24, 2015), <https://www.forbes.com/sites/erikkain/2015/04/24/video-games-should-be-more-expensive/#de30e306eb9c>; see also Kyle Orland & Jonathan Gitlin, *Why Retail Console Games Have Never Been Cheaper, Historically*, ARS TECHNICA (June 30, 2013), <https://arstechnica.com/gaming/2013/06/why-retail-console-games-have-never-been-cheaper-historically/> (“The real price of a new, mass market, disc-based console game has . . . topped out around \$60 in today’s dollars . . .”).

28. See Superannuation, *How Much Does It Cost To Make A Big Video Game?*, KOTAKU (Jan. 15, 2014) <https://kotaku.com/how-much-does-it-cost-to-make-a-big-video-game-1501413649> (finding that the average budget of a AAA game for “the generation of games following [the] Xbox 360 and Playstation 3 would be \$60 million”); see also Kyle Orland, *DICE 2011: Mark Cerny on the Death of the \$50 Million Game*, GAMASUTRA (Feb. 10, 2011), https://www.gamasutra.com/view/news/123416/DICE_2011_Mark_Cerny_On_The_Death_Of_The_50_Million_Game.php (finding that some games will have budgets exceeding \$50 million).

Microtransactions, therefore, offer another way for developers to make up the difference, although commentators argue that an increase in baseline game prices will not disrupt profitable loot box mechanics.²⁹

B. LOOT BOXES AS SKINNER BOXES—PSYCHOLOGICAL RESEARCH

The law has long recognized the particular vulnerability of children to gambling,³⁰ due in part to a lower ability to make reasoned decisions and poor impulse control.³¹ Studies on adolescent gambling estimate that approximately 4 percent to 8 percent of adolescents are pathological gamblers.³² In contrast, the rate of pathological gambling in adults hovers around 1 percent.³³

Treatment for gambling addiction is typically cognitive-behavioral therapy.³⁴ Pathological gamblers tend to engage in numerous fallacies when gambling, including the notion that they are “due” after a series of losses, that “near-misses” indicate that success is imminent, and that various superstitions will

29. See Paul Tassi, *Why \$80 to \$100 Video Games Aren't the Answer to Loot Boxes*, FORBES (Nov. 28, 2017), <https://www.forbes.com/sites/insertcoin/2017/11/28/why-80-100-video-games-arent-the-answer-to-loot-boxes/#83ca5cf4d829> (“[T]here’s little guarantee that even if prices did go up, that benevolent publishers would all get together and banish microtransactions from games.”).

30. See generally NAT’L RESEARCH COUNCIL, *PATHOLOGICAL GAMBLING: A CRITICAL REVIEW*, 283–84 (1999) (listing the age restrictions on gambling by state).

31. See Anne Gaboury & Robert Ladouceur, *Evaluation of a Prevention Program for Pathological Gambling Among Adolescents*, 14 J. PRIMARY PREVENTION 21, 22 (1993) (discussing adolescent gamblers as having a “failure to resist impulses to gamble”).

32. See *id.* (discussing data showing that 5.7 percent of adolescents are pathological gamblers); see also Lucia Sideli et al., *Pathological Gambling in Adolescence: A Narrative Review*, 6 MEDITERRANEAN J. CLINICAL PSYCHOL. 3 (2018).

33. See Christine Reilly, *The Prevalence of Gambling Disorders in the United States: Three Decades of Evidence*, in 3 GAMBLING & THE PUB. HEALTH, PART 1 at 3–6 (2009).

34. See Timothy W. Fong, *More Adolescents Are Gambling—with Addiction*, 5 CURRENT PSYCHIATRY 59, 64 (2006) (“Cognitive behavioral therapy... can be successful for highly motivated gamblers . . .”); Timothy W. Fong, *Pathological Gambling in Adolescents: No Longer Child’s Play*, 29 ADOLESCENT PSYCHIATRY 119, 113 (2006) (“The most researched form of individual therapy for pathological gambling is cognitive-behavioral therapy.”).

bring about success.³⁵ Therapy is designed to help gamblers recognize these thoughts and address them.³⁶ In addition, mathematics courses may help students make better-informed decisions about gambling.³⁷

The ill effects of pathological gambling may be compounded by compulsive game playing. The prevalence of unhealthy gaming has led the World Health Organization to draft a proposed disorder for inclusion in the International Classification of Diseases (ICD) “gaming disorder,”³⁸ with a related entry for “hazardous gaming”:

Hazardous gaming refers to a pattern of gaming, either online or offline that appreciably increases the risk of harmful physical or mental health consequences to the individual or to others around this individual. The increased risk may be from the frequency of gaming, from the amount of time spent on these activities, from the neglect of other activities and priorities, from risky behaviours associated with gaming or its context, from the adverse consequences of gaming, or from the combination of these. The pattern of gaming is often persists [sic] in spite of awareness of increased risk of harm to the individual or to others.³⁹

While the ICD entries on “hazardous gaming” and “gaming disorder” are not authored specifically to address loot boxes, their inclusion may provide additional support for state actors attempting to change the current loot box regime.⁴⁰ This avenue

35. See generally Carrie A. Leonard, Robert J Williams & John Vokey, *Gambling Fallacies: What are They and How are They Best Measured*, 6 J. ADDICTION RES. & THERAPY 256 (2015); see also NAT'L RESEARCH COUNCIL, *supra* note 30, at 241 (“People generally have a strong need to impose order or meaning on random processes . . . contribut[ing] to the gambler's fallacy . . .”).

36. See Fong, *More Adolescents Are Gambling—with Addiction*, *supra* note 34, at 133 (“CBT for pathological gamblers has been shown effective in reducing the number of cognitive distortions and subsequent gambling behaviors.”).

37. See Richard A Labrie, *Facing the Odds: The Mathematics of Gambling and Other Risks*, CAMBRIDGE HEALTH ALLIANCE: DIVISION ON ADDICTION, http://www.divisiononaddiction.org/curr/facing_the_odds.htm (last updated Feb. 24, 2015) (arguing that increasing interest in mathematics can reduce the likelihood of addictive behaviors among adolescents).

38. WORLD HEALTH ORG., INTERNATIONAL STATISTICAL CLASSIFICATION OF DISEASES AND RELATED HEALTH PROBLEMS 6C51 (11th ed. 2018).

39. *Id.* at QE22.

40. Indeed, U.S. Senator Maggie Hassan cited the World Health Organization's “gaming disorder” classification in arguing that the ESRB should reexamine the effect of loot boxes on children. See Paul Tassi, *US Senator Confronts The ESRB Over Loot Box Classification and Addiction*, FORBES (Feb. 15, 2018), <https://www.forbes.com/sites/insertcoin/2018/02/15/us->

of attack may be especially effective because loot box developers are specifically targeting and manipulating cognitive behaviors of vulnerable purchasers who may already demonstrate an unhealthy relationship to gaming.⁴¹

In psychological terms, loot boxes can be thought of as “Skinner boxes.” B.F. Skinner, a famous behaviorist concerned with operant conditioning, noted that the doling out of rewards on a random schedule attendant to an action recruited repeated attempts of that action.⁴² The uncertain but tantalizingly close reward enlists constant attempts.⁴³

Developers employ a number of techniques to increase the allure of loot boxes. Several games use prize-wheel spinners, triggering near-miss reactions as the desired item was just out of reach.⁴⁴ This is not unlike a gambler being triggered by a slot machine that *almost* hit the jackpot.⁴⁵ Near-misses also encourage gamblers to believe they are due for a big win,⁴⁶ in part by firing reinforcement centers in the brain that make the failure feel a little like success.⁴⁷ Music and graphic cues

senator-confronts-the-esrb-over-loot-box-classification-and-addiction/#17f257d55a97.

41. See Heather Alexandra, *Loot Boxes Are Designed to Exploit Us*, KOTAKU AU (Oct. 16, 2017, 9:00 AM), <https://www.kotaku.com.au/2017/10/loot-boxes-are-designed-to-exploit-us/> (“[T]he only reason the loot box exists is to prey on the economically vulnerable.”).

42. B.F. SKINNER, *SCIENCE AND HUMAN BEHAVIOR* 65 (1953) (“In operant conditioning we ‘strengthen’ [a class of responses] in the sense of making a response more probable or, in actual fact, more frequent.”).

43. See *id.* at 100 (“If we reinforce behavior at regular intervals, an organism such as a rat or pigeon will adjust with a nearly constant rate of responding.”).

44. See Peter Bright, *Op-Ed: Game Companies Need to Cut the Crap—Loot Boxes Are Obviously Gambling*, ARS TECHNICA (May 28, 2018, 9:00 AM), <https://arstechnica.com/gaming/2018/05/op-ed-game-companies-need-to-cut-the-crap-loot-boxes-are-obviously-gambling/> (discussing the use of near misses and spinning wheels in loot box animations to encourage further spending).

45. See Luke Clark et al., *Gambling Near-Misses Enhance Motivation to Gamble and Recruit Win-Related Brain Circuitry*, 61 NEURON 481, 484 (2009) (describing experiments comparing “two types of nonwin outcome: near-misses, where the slot machine reel stopped one position from the chosen icon, and full-misses, where the outcome was not proximal to a win”).

46. See Denis Côté et al., *Near Wins Prolong Gambling on a Video Lottery Terminal*, 19 J. GAMBLING STUD. 433, 437 (2003) (“[N]ear wins can increase persistence to gamble.”).

47. See Clark, *supra* note 45, at 486–87 (noting that near-misses may trigger the “mesolimbic reward system” and that “[g]ambling near-misses were

heighten tension and create a ritual that entices repeat purchases.⁴⁸ “When you start opening a loot box, we want to build anticipation,” according to an *Overwatch* developer.⁴⁹ “We do this in a lot of ways—animations, camera work, spinning plates, and sounds. We even build a little anticipation with the glow that emits from a loot box’s cracks before you open it.”⁵⁰ The ritual also provides game players with the opportunity to engage in superstition, ascribing meaning to random deviations in opening animations or combinations.⁵¹

Loot box purchasers, much like a pathological gambler placing a wager, report an initial rush when opening a loot box and then a wave of regret and shame.⁵² This aftershock can be so extreme as to trigger self-harm.⁵³ Users may seek out this stimulus by proxy, watching videos of other users unbox bulk purchases. Indeed, compilations of loot box opening are frequently posted on YouTube,⁵⁴ with some videos receiving

associated with significant recruitment of brain win-related circuitry and acted to increase the desire to gamble when the subject had personal control over selecting the gamble”).

48. Examples of these animations may be viewed on YouTube. *See, e.g.,* ScrewKiller, *7 Top Loot Box Game Opening Animation*, YOUTUBE (Nov. 26, 2017), https://www.youtube.com/watch?v=P2D_v9a_GgM.

49. Heather Alexandra, *supra* note 41 (quoting an anonymous *Overwatch* developer).

50. *Id.*

51. *See* NAT’L RESEARCH COUNCIL, *supra* note 30, at 241 (“[M]any gamblers also believe independent, random events are somehow connected.”).

52. *See* McGrody, *supra* note 12. The author recounts stories from addicts, noting that opening multiple loot boxes “had a feeling of a continuous rush . . . like opening a bunch of Christmas presents” and that “the rush of pulling [items from a loot box] is addicting” but that this rush was replaced by shame. Another player said, “I realized what I had done, checked my bank account and wanted to throw up.” It is worth comparing these narratives with the Diagnostic and Statistical Manual of Mental Disorders symptoms for Pathological Gambling which include a tolerance, resulting in taking “greater risk . . . needed to continue to produce the desired level of excitement” and attendant regret resulting in “repeated unsuccessful efforts to control, cut back, or stop gambling.” AM. PSYCHIATRIC ASS’N, DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS § 312.31, at 616 (5th ed. 2013).

53. *See* McGrody, *supra* note 12 (“I ended up calling a suicide hotline that night. I felt distraught, pathetic, that I had just blown so much money on nothing but virtual jewels. I felt like I deserved to die for letting it get so bad and for wasting this much money.”).

54. A search of “loot box opening” on YouTube yields more than 182,000 results. https://www.youtube.com/results?search_query=%22loot+box+opening%22.

millions of views.⁵⁵ Game companies are aware that a user who watches others open loot boxes will be more likely to buy a loot box. For example, Activision plans to actively reward players who watch other players unbox loot through in-game streaming.⁵⁶

In contrast to designers of other gambling systems, game designers can shape not only the feedback mechanism but can also manipulate other game playing experiences to incentivize user purchases. A 2017 patent, “System and Method for Driving Microtransactions in Multiplayer Video Games,” granted to the game developer Activision sets out numerous purchase-increasing avenues connected to multiplayer match-making.⁵⁷ These include:

- **Creating an achievement gap:** Systems can match a junior player against a marquee player who has already purchased elite weapons. “A junior player may wish to emulate the marquee player by obtaining weapons or other items used by the marquee player.”⁵⁸
- **Pairing a user with a purchasing role-model:** The game may further refine the above-referenced enticement by placing junior users in matches against marquee users who have adopted the very strategy preferred by the junior users:
[T]he junior player may wish to become an expert sniper in a game (e.g., as determined from the player profile). The microtransaction

55. See, e.g., Muselk, *Overwatch: Unboxing 101 Halloween Loot Boxes!*, YOUTUBE (Oct. 11, 2016), https://www.youtube.com/watch?v=dyf_UbtfGOY (showing 2.8 million views as of Nov. 8, 2018); Muselk, *[Overwatch] Unboxing 201 Anniversary Lootboxes + Giveaway*, YOUTUBE (May 23, 2017), <https://www.youtube.com/watch?v=Rou5wPuOOSI> (showing 3.2 million views as of Nov. 8, 2018). *Overwatch* is not the only game with such videos. See, e.g., MasterOv – Mobile & io Games, *Fallout Shelter - OMG BEST GUN EVER! MY FIRST LUNCH BOX OPENING! - Fallout Shelter IOS Gameplay*, YOUTUBE (June 30, 2015), <https://www.youtube.com/watch?v=HkJNTexLyOE> (showing 782,160 views as of Nov. 8, 2018).

56. See Rachel Weber & Sam Loveridge, *Why It'll Pay to Hang Out in Call of Duty WW2's New Social Headquarters*, GAMESRADAR (Aug. 24, 2017) <https://www.gamesradar.com/why-itll-pay-to-hang-out-in-call-of-duty-ww2s-new-social-headquarters/> (“If you open your [loot box] and get something really cool, there’s a chance people watching you open your [loot box] will also get something cool.”).

57. U.S. Patent No. 9,789,406 (filed May 14, 2015) (issued Oct. 17, 2017).

58. *Id.* at col. 5, l. 37.

engine may match the junior player with a player that is a highly skilled sniper in the game. In this manner, the junior player may be encouraged to make game-related purchases such as a rifle or other item used by the marquee player.⁵⁹

- **Rewarding purchasers with immediate success:** Targeted match-making can also boost the satisfaction of users immediately after their purchases by placing them in matches where the newly purchased item is particularly effective “giving the player an impression that the particular weapon was a good purchase. This may encourage the player to make future purchases to achieve similar gameplay results.”⁶⁰

C. GAMER RESPONSE—TOLERABLE FOR COSMETIC ITEMS

While game players have bemoaned microtransactions, particular ire is reserved for those transactions that provide a competitive advantage. The criticism of “pay-to-win” games is ferocious. For example, the inclusion of the mechanic allowing users to buy additional basketball skills in *NBA 2K18* resulted in the lowest Metacritic user-rating in the series, 1.6 out of 10,⁶¹ with users complaining that virtual currency was needed for nearly every aspect of the game. One user memorably remarked “[y]ou either have to spent [sic] lots of extra money or suffer through hours of comically poor gameplay, in what they call the road to 99. This is not the road to 99, this is the road to hell.”⁶²

Microtransactions for purely cosmetic changes or collectibles, such as “skins” for characters, are far less offensive.⁶³ For example, the loot boxes in *Overwatch* drop only player costumes that have no effect on game play.⁶⁴ While users

59. *Id.* at col. 24, l. 37.

60. *Id.* at col. 6, l. 6.

61. *NBA 2k18*, METACRITIC, <http://www.metacritic.com/game/playstation-4/nba-2k18> (last visited November 8, 2018).

62. xmicta, User Review to *NBA 2k18*, METACRITIC: USER REVIEWS (Sept. 18, 2017), <https://www.metacritic.com/game/playstation-4/nba-2k18/user-reviews>.

63. See Paul Tassi, *Activision is Doing Loot Boxes Right, EA is Doing Them Horribly Wrong*, FORBES (Nov. 14, 2017), <https://www.forbes.com/sites/insertcoin/2017/11/14/activision-is-doing-loot-boxes-right-ea-is-doing-them-horribly-wrong/#18f693f33b24>.

64. See Daniel Tack, *Blizzard's Mike Morhaime Talks Loot Boxes, Battle.net, Mobile, And More*, GAME INFORMER (Nov. 7, 2017 4:19 PM), <http://www.gameinformer.com/b/features/archive/2017/11/07/blizzard-39-s->

may dislike this system, it is generally looked on more favorably than perceived “pay-to-win” games.⁶⁵

D. INDUSTRY RESPONSE AND CASE STUDIES

1. “Pay-To-Win” Comes to Full-Price Games

2017 saw a rash of games with loot box microtransactions that offered competitive advantages or were perceived as necessary to complete the game.⁶⁶ These “pay-to-win” games have precipitated greater discussion of loot boxes. While previous pay-to-win titles involved free-to-play mobile games such as *Clash Royale* and *Fire Emblem Hero*,⁶⁷ numerous full-price games incorporated the mechanic in 2017. The first crop of major releases incorporating this dynamic included *Need for Speed: Payback*, *Forza MotorSport 7*, and *Middle-earth: Shadow*

mike-morhaime-talks-loot-boxes-battle-net-blizzcon-and-more.aspx (differentiating *Overwatch* from games offering gameplay advantages in loot boxes).

65. See, e.g., Maxwell Jeffery, *Why Star Wars Battlefront 2 Removed Cosmetics from Loot Boxes*, GAMERANT (Jan. 4, 2018), <https://gamerant.com/star-wars-battlefront-2-cosmetic-loot-box/> (“*Overwatch* make[s] good use of the system by having the drops contain purely cosmetic items so as to not impact the core gameplay experience. *Star Wars Battlefront 2*, on the other hand, uses loot boxes . . . that can give players an edge online.”); Robert Workman, *Anthem’s Loot Box System Will Only Involve Cosmetic Items, Says Analyst*, COMICBOOK (Jan. 3, 2018), <http://comicbook.com/gaming/2018/01/04/anthems-loot-box-system-bioware-cosmetic-items/> (calling payments for loot boxes in *Overwatch* “ancillary”).

66. See, e.g., Jason Schreier, *Fall Loot Box Glut Leads to Widespread Alarm*, KOTAKU (Oct. 10, 2017 4:30 PM), <https://kotaku.com/fall-loot-box-glut-leads-to-widespread-alarm-1819328610> (noting at least three major games that included loot boxes in recent versions); Sam Machkovech, *Loot Boxes Have Reached a New Low with Forza 7’s “Pay-to-Earn” Option*, ARS TECHNICA (Sept. 29, 2017 6:00 AM), <https://arstechnica.com/gaming/2017/09/loot-boxes-have-reached-a-new-low-with-forza-7s-pay-to-earn-option/>.

67. See Jessica Famularo, *‘Fire Emblem Heroes’ Is a Gacha Game – Here’s What That Means*, INVERSE (Feb. 2, 2017), <https://www.inverse.com/article/27267-what-are-gacha-games-fire-emblem-heroes>; Andrew Reiner, *Clash Royale and the Guilt of Pay-to-Win Gaming*, GAMEINFORMER (Mar. 22, 2016, 12:14 PM).

of War, among others.⁶⁸ These releases were harshly reviewed for their inclusion of loot boxes.⁶⁹

2. Electronic Arts—*Star Wars Battlefront 2* Full Price Debacle

Perhaps the most famous developer reaction to loot box protests was that of Electronic Arts with full-price game *Star Wars Battlefront 2*. The popular game entered public beta-testing on October 6, 2017.⁷⁰ The game contained “star cards” which provided stats boosts and abilities for use in multiplayer play.⁷¹ The best of these cards – “epics” – were obtainable only through in-game loot boxes.⁷² Upon release, it was unclear whether these loot-boxes could be purchased with real money or in-game currency.⁷³ This occasioned numerous complaints that such a system was “pay-to-win.”⁷⁴

68. See Hayden Dingman, *How Loot Boxes Are Turning Full-Priced PC Games into Pay-to-Win Games of Chance*, PC WORLD (Oct. 10, 2017, 3:30 AM), <https://www.pcworld.com/article/3231668/gaming/loot-boxes-ruining-gaming.html>; Hayden Dingman, *Need for Speed: Payback Review: Pouring Loot Boxes on a Tire Fire*, PC WORLD (Nov. 10, 2017, 7:26 AM), <https://www.pcworld.com/article/3236057/gaming/need-for-speed-payback-review.html>.

69. See, e.g., AngryJoeShow, *NFS: Payback Loot Boxes - Angry Rant!*, YOUTUBE (Nov. 14, 2017), <https://www.youtube.com/watch?v=wFAG2MLVjAY>; Pretty Good Gaming, *Shadow of War Ending LOCKED Behind Loot Boxes or HUGE GRIND!?*, YOUTUBE (Oct. 9, 2017), <https://www.youtube.com/watch?v=el39hB8t37A>.

70. See Erik Kain, *Everything You Need to Know About the ‘Star Wars: Battlefront 2’ Beta*, FORBES (Oct. 3, 2017, 11:45 AM), <https://www.forbes.com/sites/erikkain/2017/10/03/everything-you-need-to-know-about-the-star-wars-battlefront-2-beta/#7b9617b977b7>.

71. See *Star Cards and Crates Add New Progression Options*, ELECTRONIC ARTS, <https://www.ea.com/games/starwars/battlefront/battlefront-2/news/star-wars-battlefront-ii-star-cards-1> (last visited Nov. 7, 2018).

72. See Hannah Dwan, *The Loot Boxes in Star Wars Battlefront 2 Are Changing Due to Player Feedback*, THE TELEGRAPH: TECH. INTELLIGENCE (Nov. 1, 2017, 1:26 PM), <https://www.telegraph.co.uk/gaming/news/loot-boxes-star-wars-battlefront-2-changing-due-player-feedback/> (discussing the beta-version use of loot boxes in *Star Wars Battlefront 2*).

73. See Heather Alexandra, *Star Wars Battlefront 2 Beta Shows EA has Made Better Choices This Time*, KOTAKU (Oct. 5, 2017, 10:00 AM), <https://www.kotaku.com.au/2017/10/the-star-wars-battlefront-ii-beta-shows-ea-has-made-better-choices-this-time/>.

74. See, e.g., AngryJoeShow, *Angry Rant – WTF?! At the Loot Crates in Battlefront 2*, YOUTUBE (Oct. 8, 2017), <https://www.youtube.com/watch?v=ne4CnyNW9O4>; Jim Sterling, *Star Wars Battlefront 2: A Pay-To-Win Loot Box Bollock Hole*, YOUTUBE (Oct. 12, 2017),

EA responded two days later, suggesting they would change the system: “As a balance goal, we’re working towards having the most powerful items in the game only earnable via in-game achievements” as opposed to purchasable boxes.⁷⁵ However, EA made clear that purchases might still be retained to allow an alternative to grinding, noting that the company “will work to make sure the system is balanced both for players who want to earn everything, as well as for players who are short on time and would like to move faster in their progress towards various rewards.”⁷⁶ The company later confirmed that “Epic Star Cards, the highest tier of Star Cards available at launch, have been removed from Crates.”⁷⁷

The game went pre-release live on November 9, 2017.⁷⁸ As suspected, the loot boxes were purchasable with real money or with in-game currency earned by grinding.⁷⁹ The meager amount of in-game currency earned meant that consumers would need to grind for days to restore competitive balance with consumers who opted to purchase crates with cash.⁸⁰ Additionally, famous characters such as Darth Vader could only be unlocked with very high amounts of credits (themselves derived from in-game achievements or recycling duplicate star cards).⁸¹ EA responded to consumer outcry by removing

<https://www.youtube.com/watch?v=XUfkGSbabSo> (drawing numerous comments lambasting EA for the “pay-to-win” format); TotalBiscuit, *I Will Now Talk About Lootboxes and Gambling for Just over 40 Minutes*, YOUTUBE (Oct. 8, 2017), <https://www.youtube.com/watch?v=YMDGPSWWA18>.

75. *Thank You for Playing the Beta*, ELECTRONIC ARTS, <https://www.ea.com/games/starwars/battlefront/battlefront-2/news/thank-you-beta> (last visited Nov. 25, 2018).

76. *How We’ve Updated Crates and Progression*, ELECTRONIC ARTS, <https://www.ea.com/games/starwars/battlefront/battlefront-2/news/progression-oct-2017> (last visited Nov. 7, 2018).

77. *Id.*

78. See Kain, *supra* note 70.

79. See Heather Alexandra, *Star Wars Battlefront 2 Lets You Pay Real Money for Multiplayer Advantages*, KOTAKU (Nov. 11, 2017, 12:00 PM), <https://www.kotaku.com.au/2017/11/star-wars-battlefront-2-lets-you-pay-real-money-for-multiplayer-advantages/>.

80. See *id.* (“The loot crates add an unnecessary layer of complication, upset the game’s balance, and exist entirely to screw you over.”).

81. See GameSpot Staff, *Star Wars Battlefront 2’s Loot Box Controversy Explained*, GAMESPOT (Nov. 22, 2017, 12:37 PM), <https://www.gamespot.com/articles/star-wars-battlefront-2s-loot-box->

microtransactions immediately before the launch of the game, adjusting the cost of specific heroes and the rate of credit awards for in-game achievements.⁸² However, this did not remove the game advancement designs predicated on the loot box mechanic, it merely made it impossible to avoid grinding in order to gain in-game currency. There remains speculation that microtransactions in some form will return to the game.⁸³

Battlefront's loot box system has occasioned serious economic and political consequences. The game missed sales targets, which EA attributed to the loot box controversy.⁸⁴ The episode also sparked greater discussion of loot boxes in the game playing community and legislative bodies.⁸⁵ Hawaii state representative Chris Lee noted, "This game is a Star Wars-themed online casino, designed to lure kids into spending money. It's a trap."⁸⁶

3. Apple—Mandatory Odds Disclosure

Apple recently altered App Store requirements to ensure the disclosure of loot box odds by game developers: "Apps offering 'loot boxes' or other mechanisms that provide randomized virtual items for purchase must disclose the odds of receiving each type

controversy-expl/1100-6455155/ (stating that Darth Vader's character cost 60,000 credits at one time).

82. See Allegra Frank, *Star Wars Battlefront 2 Update Increases Credit Drops, with More Changes to Come*, POLYGON (Dec. 4, 2017, 10:59 AM), <https://www.polygon.com/2017/12/4/16733416/star-wars-battlefront-2-loot-boxes-credit-rewards-increased>.

83. See Paul Tassi, *Seven Weeks After Launch, Battlefront 2's Microtransactions Remain Shelved*, FORBES (Jan. 4, 2018, 9:24 AM), <https://www.forbes.com/sites/insertcoin/2018/01/04/seven-weeks-after-launch-battlefront-2s-microtransactions-remain-shelved/#695fdbce6222> ("I don't believe that Battlefront 2 will stay microtransaction free forever. My guess is that there will be some sort of cosmetics system introduced down the road, which will either contain new loot boxes or a more traditional storefront (but probably loot boxes).").

84. See Samit Sakar, *Star Wars Battlefront 2 Sales Miss Targets, EA Blames Loot Crate Controversy (Update)*, POLYGON (Jan. 30, 2018, 5:05 PM), <https://www.polygon.com/2018/1/30/16952396/star-wars-battlefront-2-sales-loot-boxes-returning> ("Sales of *Star Wars Battlefront 2* fell short of Electronic Arts' expectations, and the publisher is citing the furor over the game's microtransactions as the primary explanation.").

85. See Alexandra, *supra* note 41.

86. Chris Lee, *Highlights of the Predatory Gaming Announcement*, YOUTUBE (Nov. 21, 2017), https://www.youtube.com/watch?v=_akwfRuL4os.

of item to customers prior to purchase.”⁸⁷ While a potential step in the right direction, the App Store rule is vague enough to allow developers to continue to hide true odds from game players.⁸⁸ Items are typically organized into class rarity categories like “rare,” “epic,” and “legendary.”⁸⁹ Developers may announce overall odds in terms of those categories, e.g., announcing that a loot box has a 1 in 13.5 chance to contain a “legendary” item, while keeping individual item rates a secret.⁹⁰ Thus, a user may still not know the chance of arriving at a desired item.⁹¹ Additionally, this rule was not applied to all markets simultaneously, indicating that cultural norms in markets may trump corporate concern.⁹² For example, the rule was not immediately applied to Japan.⁹³

4. The ESA—Loot Boxes are Voluntary and Not Gambling

Unsurprisingly, the Entertainment Software Association (ESA), a trade association, has strongly opposed any suggestion that loot boxes are a form of gambling.⁹⁴ ESA has wrongly made this argument based on the voluntary nature of the activity,

87. *App Store Review Guidelines: 3.1.1 In-App Purchases*, APPLE INC., <https://developer.apple.com/app-store/review/guidelines/#in-app-purchase> (last updated Dec. 19, 2018).

88. See Sam Machkovech, *Apple Now Requires App Store Games with Loot Boxes to List Odds*, ARS TECHNICA (Dec. 21, 2017, 1:05 PM), <https://arstechnica.com/gaming/2017/12/apple-now-requires-app-store-games-with-loot-boxes-to-list-odds/> (comparing Apple’s rule to similarly-phrased Chinese rules that allowed Blizzard to use unclear descriptions in its disclosure and “leave players in the dark”).

89. See *id.*

90. See *id.*

91. *Id.*

92. See Casey Baseel, *Apple Still Lets Video Game Developers Keep Their Loot Box Odds a Secret in Japan*, SORANEWS24 (Dec. 22, 2017), <https://en.rocknews24.com/2017/12/22/apple-still-lets-video-game-developers-keep-their-loot-box-odds-a-secret-in-japan/> (finding that the lack of change to Japan’s App Store rules could be “a reflection of the lower level of outrage towards randomized video game content purchases in Japan”).

93. See *id.*

94. See Brian Crecente, *State Rep to Video Game Industry: Regulate Loot Boxes Before We Are Forced to Legislate*, ROLLING STONE (November 27, 2017), <https://web.archive.org/web/20171128005142/http://www.rollingstone.com/glixel/news/esrb-asked-to-address-battlefront-ii-loot-via-ratings-w512718> (discussing Hawaii state representatives’ proposed solution for squashing the dangers of encouraging children to gamble).

rather than the relative value of resulting items.⁹⁵ The ESA stated:

Loot boxes are a voluntary feature in certain video games that provide players with another way to obtain virtual items that can be used to enhance their in-game experiences. They are not gambling. Depending on the game design, some loot boxes are earned and others can be purchased. In some games, they have elements that help a player progress through the video game. In others, they are optional features and are not required to progress or succeed in the game. In both cases, the gamer makes the decision.⁹⁶

The ESA's approach is odd as gambling definitions do not typically revolve around volition—it is assumed that bets do not place themselves and that a viewer can watch a race without placing a wager.⁹⁷

5. ESRB—Loot Boxes are Not Gambling Due to Assured Receipt of Items

The domestic game rating organization, Entertainment Software Rating Board (ESRB), has similarly commented that loot boxes are not considered to be gambling.⁹⁸ However, the ESRB appears to base this conclusion not on the voluntary nature of the activity but rather on the guaranteed payout.⁹⁹ According to an ESRB spokesperson,

ESRB does not consider loot boxes to be gambling. While there's an element of chance in these mechanics, the player is *always* guaranteed to receive in-game content (even if the player unfortunately receives something they don't want). We think of it as a similar principle to collectible card games: Sometimes you'll open a pack and get a brand new holographic card you've had your eye on for a while. But other times you'll end up with a pack of cards you already have.¹⁰⁰

95. *Id.*

96. *Id.*

97. *Id.*

98. Jason Schreier, *ESRB Says It Doesn't See 'Loot Boxes' As Gambling*, KOTAKU (Oct. 11, 2017, 12:46 PM), <https://kotaku.com/esrb-says-it-doesnt-see-loot-boxes-as-gambling-1819363091> (finding that “‘Real Gambling’ is any sort of wagering involving real cash, while ‘Simulated Gambling’ means that the ‘player can gamble without betting or wagering real cash or currency’”).

99. *Id.*

100. *Id.*

Commentators have criticized this position, correctly pointing out that the search for a desired item constitutes the win/fail state commonly encountered in traditional gambling.¹⁰¹

II. STATE ACTOR RESPONSE

The proposed responses by state actors have focused on two tracks: banning the sale of games with loot boxes to minors,¹⁰² and increasing transparency through the labeling and disclosure of odds within games containing loot box mechanics.¹⁰³ Actors have differed as to how to effectuate these reforms. Some attempt to directly regulate the activity through legislation,¹⁰⁴ some appeal to domestic game rating organizations to enforce age-appropriate rating standards,¹⁰⁵ while others have referred the matter to domestic gaming commissions.¹⁰⁶

The last approach is unlikely to succeed, as it can be difficult to squarely conceive of loot boxes as gambling under existing statutes.¹⁰⁷ Moreover, the classification of loot boxes as gambling, through private suit or gaming commissions, seems an unlikely outcome based on existing case law—baseball cards

101. Erik Kain, *The ESRB is Wrong About Loot Boxes and Gambling*, FORBES (Oct. 12, 2017, 7:00 AM), <https://www.forbes.com/sites/erikkain/2017/10/12/the-esrb-is-wrong-about-loot-boxes-and-gambling/#579cdb122a64> (finding that “unlike a slot machine, a loot box will always result in some form of a prize, that doesn’t change the fact that the simple act of opening loot boxes is incredibly similar to gambling, and taps into all the same parts of the brain”).

102. See H.R. 2686, 2018 Leg., 29th Sess. (HI 2018); S. 3024, 2018 Leg., 29th Sess. (HI 2018) (proposing to ban the sale of loot box content games to any customer under the age of 21). However, outright bans of video game mechanics are troubling, as video games are often the focus of public hysteria.

103. See H.B. 2727, 29th Leg., Reg. Sess. (Haw. 2018); S.B. 3025, 29th Leg., Reg. Sess. (Haw. 2018) (seeking to establish firm labeling and disclosure requirements for games with loot box content).

104. See S.B. 3025, 29th Leg., Reg. Sess. § II(A) (Haw. 2018) (discussing proposed state legislation to ban the sale of games with loot boxes to minors and increasing transparency through the labeling and disclosure of odds within games).

105. See S.B. 3025, 29th Leg., Reg. Sess. § II (B) (finding that U.S. Senators are discussing their concern with loot box mechanics to the ESRB in hopes that their discussion may encourage additional industry response).

106. See S.B. 3025, 29th Leg., Reg. Sess. § II (E–F) (finding that Belgium, Germany and New Zealand have deferred to their gambling regulation agency to decide whether loot boxes are a form of gambling).

107. *Id.*

and collectible card games, such as *Pokémon*,¹⁰⁸ have attracted similar gambling lawsuits and investigations to no avail.¹⁰⁹ The difficulty arises from the notion of value.¹¹⁰ That is, if items are treated as having value, then the fact that the user receives a valuable (if undesired) item helps guard against charges of gambling injury.¹¹¹

Courts have found that in light of the fact that “trading card packs and display boxes typically state the odds of receiving in a given pack an insert card from any of the various insert sets” and that “[a]lmost every card manufacturer also includes a disclaimer which states that the advertised odds are an average for the entire production run and are not guaranteed within an individual pack or box,” the consumer was entering into an informed bargain.¹¹² It is true that rare insert cards have a higher resale value, and users may purchase card packs in search of valuable cards.¹¹³ That the consumer receives at least some value in the form of the more common cards, however, prevents a clear finding of gambling injury:

Purchasers of trading cards do not suffer [a gambling injury] when they do not receive an insert card. At the time the plaintiffs purchased the package of cards, which is the time the value of the package should be determined, they received value—eight or ten cards, one of which might be an insert card—for what they paid as a purchase price. Their disappointment upon not finding an insert card in the package is not an injury to property.¹¹⁴

108. See David Halbfinger, *Suit Claims Pokemon Is Lottery, Not Just Fad*, NEW YORK TIMES (Sept. 24, 1999), <http://www.nytimes.com/1999/09/24/nyregion/suit-claims-pokemon-is-lottery-not-just-fad.html> (discussing a class action made up of concerned mothers and fathers alleging that Pokemon constituted a form of illegal gambling).

109. See *Chaset v. Fleer/Skybox Int'l, LP*, 300 F.3d 1083, 1086 (9th Cir. 2002); *Price v. Pinnacle Brands, Inc.*, 138 F.3d 602, 607 (5th Cir. 1998) (per curiam); *Dumas v. Major League Baseball Props., Inc.*, 104 F. Supp. 2d 1220, 1223 (S.D. Cal. 2000); see also *Rodriguez v. Topps Co.*, 104 F. Supp. 2d 1224, 1227 (S.D. Cal. 2000); *Schwartz v. Upper Deck Co.*, 104 F. Supp. 2d 1228, 1230–31 (S.D. Cal. 2000).

110. See Halbfinger, *supra* note 108.

111. *Id.*

112. *Chaset*, 300 F.3d at 1086 (holding that purchasers of trading cards do not suffer an injury cognizable under RICO when they do not receive an insert card).

113. *Id.* at 1087.

114. *Id.*

Nor would loot boxes qualify as gambling if one considers the virtual items to be worthless.¹¹⁵ Indeed, virtual items that are tied to user accounts and not tradable in an aftermarket may be considered to have no tangible exchange price.¹¹⁶ If items are treated as having no value, then the entire operation lacks a “prize” and is not gaming.¹¹⁷ Numerous courts considering virtual casinos, with chips that cannot be traded for value, have found that the action is not licensable gambling.¹¹⁸

A review of current approaches provides a helpful overview of the variety of goals and means employed by state actors.

A. U.S. STATE LEGISLATION

1. Hawaii—Proposes Banning Sales to Minors and Requiring Odds and Content Labeling

The Hawaii legislature spearheaded the movement against the current loot box regime. State Representative Chris Lee led the effort: “I grew up playing games my whole life. I’ve watched firsthand the evolution of the industry from one that seeks to create new things to one that’s begun to exploit people, especially children, to maximize profit.”¹¹⁹ A total of four bills have been

115. See *Mason v. Mach. Zone, Inc.*, 851 F.3d 315, 319 (4th Cir. 2017) (holding that when there is no money at stake while virtually gambling, individuals do not “lose” money as required under the state’s Loss Recovery Statute).

116. *Id.* (finding that virtual gold and virtual chips are not sold on the secondary market and, therefore, not equivalent to money).

117. See *Soto v. Sky Union, LLC*, 159 F. Supp. 3d 871, 880 (N.D. Ill. 2016) (holding that because the alleged prize of Talents was not exchangeable for real money or other goods within the game, the alleged game was not a gambling game under California law).

118. See *Mason v. Mach. Zone, Inc.*, 140 F. Supp. 3d 457 (D. Md. 2015), *aff’d*, 851 F.3d 315 (4th Cir. 2017); *Soto*, 159 F. Supp. 3d at 871; *Phillips v. Double Down Interactive, LLC*, 173 F. Supp. 3d 731 (N.D. Ill. 2016); Desirée Martinelli, *Skin Gambling: Have We Found the Millennial Goldmine or Imminent Trouble?*, 21 GAMING L. REV. 557, 564 (2017) (arguing that skin gambling does not have any tangible worth and is therefore legal). *But cf. Kater v. Churchill Downs, Inc.*, 886 F.3d 784, 787 (9th Cir. 2018) (holding that virtual chips used, among other purposes, to play games in a virtual casino had tangible worth under Washington law).

119. Michael Brestovansky, *Bills target video games with rewards for a price*, HAWAII TRIBUNE-HERALD, (Feb. 12, 2018, 12:05 AM), <http://www.hawaiitribune-herald.com/2018/02/12/hawaii-news/bills-target-video-games-with-rewards-for-a-price/>.

introduced in the Hawaii legislature to address the proper sale and labeling requirements of games involving loot boxes.¹²⁰ House Bill 2686 and Senate Bill 3024 aim to ban the sale of such games to any customer under the age of 21.¹²¹ Both bills note that the “predatory mechanisms . . . known as a loot boxes, can present the same psychological, addictive, and financial risks as gambling.”¹²² Accordingly,

[i]t shall be unlawful for any retailer to sell to any person under twenty-one years of age a video game that contains a system of further purchasing that includes:

- (1) A randomized reward; or
- (2) A virtual item that can be redeemed to directly or indirectly receive a randomized reward.¹²³

A complimentary set of bills, House Bill 2727 and Senate Bill 3025, seek to establish firm labeling and disclosure requirements for games with loot box content.¹²⁴ The underlying logic of the bills is that loot box games are functioning as casinos, yet they do not follow the odds disclosure requirements of gaming houses.¹²⁵ Moreover, the sophistication of loot-box odds adjustment poses an insidious threat:

Unlike at casinos, there is rarely disclosure of the odds of winning items of value in loot boxes or in-game gambling-like mechanisms. There are no gaming commissions to ensure players are being treated fairly and not exploited by gambling-like mechanisms which do not pay out as advertised. Game publishers have already begun to develop algorithms which are far more exploitive than casino games because they can now change the odds of winning valuable items in real time based on a player’s reactions and likelihood of continued spending, an

120. *Id.*

121. See H.B. 2727, 29th Leg., Reg. Sess. (Haw. 2018); S.B. 3025, 29th Leg., Reg. Sess. (Haw. 2018).

122. H.B. 2686, 29th Leg., Reg. Sess. (Haw. 2018), https://www.capitol.hawaii.gov/session2018/bills/HB2686_.pdf; accord S.B. 3024, 29th Leg., Reg. Sess. (Haw. 2018), https://www.capitol.hawaii.gov/session2018/bills/SB3024_SD1_.PDF.

123. S.B. 3024, 29th Leg., Reg. Sess. (Haw. 2018), https://www.capitol.hawaii.gov/session2018/bills/SB3024_SD1_.PDF.

124. See H.B. 2727, 29th Leg., Reg. Sess. (Haw. 2018); S.B. 3025, 29th Leg., Reg. Sess. (Haw. 2018).

125. This essay argues that a more comfortable analogy would be to baseball cards, which typically disclose odds.

ability which has already been included in multiple patent applications.¹²⁶

Accordingly, the bills require all loot box games to contain a label “Warning: contains in-game purchases and gambling-like mechanisms which may be harmful or addictive” and

prominently disclose and publish to the consumer the probability rates of receiving each type of randomized reward or rewards at the time of purchase and at the time any mechanism to receive a randomized reward or rewards is activated so as to meaningfully inform the consumer’s decision prior to the purchase or activation of any mechanism to receive a randomized reward or rewards.¹²⁷

2. Washington—Proposes Referral to the State Gaming Commission

Democratic members in Washington have introduced Senate Bill 6266 in an effort to curb loot boxes.¹²⁸ The bill provides that:

- (1) The use of loot boxes and similar types of mechanisms that provide randomized virtual items in online games or apps has raised a number of serious problems and concerns, including:
 - (a) Whether games and apps containing these mechanisms are considered gambling under Washington law;
 - (b) Whether these mechanisms belong in games and apps;
 - (c) Whether minors and other young people, who may be more vulnerable to gambling addiction, should have access to games and apps with these mechanisms; and (d) the lack of disclosure and transparency with respect to the odds of receiving each type of virtual item.¹²⁹

Accordingly, the bill directs the Washington Gaming Commission to investigate the matter.¹³⁰

126. H.B. 2686, 29th Leg., Reg. Sess. (Haw. 2018), https://www.capitol.hawaii.gov/session2018/bills/HB2686_.pdf; H.B. 2727, 29th Leg., Reg. Sess. (Haw. 2018), https://www.capitol.hawaii.gov/session2018/bills/HB2727_.pdf; S.B. 3025, 29th Leg., Reg. Sess. (Haw. 2018), https://www.capitol.hawaii.gov/session2018/bills/SB3025_.PDF.

127. H.B. 2727, 29th Leg., Reg. Sess. (Haw. 2018), https://www.capitol.hawaii.gov/session2018/bills/HB2727_.pdf; S.B. 3025, 29th Leg., Reg. Sess. (Haw. 2018), https://www.capitol.hawaii.gov/session2018/bills/SB3025_.PDF.

128. See S.B. 6266, 65th Leg., Reg. Sess. (Wash. 2018), <http://lawfilesexst.leg.wa.gov/biennium/2017-18/Pdf/Bills/Senate%20Bills/6266.pdf>.

129. *Id.*

130. *Id.*

The bill has not been enacted, but the Washington Gaming Commission has previously intimated action against game hosts for facilitating gambling.¹³¹ In 2016, the Commission sent a threat letter to Valve, the company running the popular game site Steam, warning that skin gambling in Counter Strike, and other games, violated gaming laws.¹³² Valve responded aggressively that such deals did not violate any specific gaming law.¹³³

B. U.S. FEDERAL GOVERNMENT—LIMITED APPEAL TO ESRB

U.S. Senator Maggie Hassan authored a letter to the ESRB asking it “to review the completeness of the board’s ratings process and policies as they relate to loot boxes, and to take into account the potential harm these types of micro-transactions may have on children” and “to examine whether the design and marketing approach to loot boxes in games geared toward children is being conducted in an ethical and transparent way that adequately protects the developing minds of young children from predatory practices.”¹³⁴

Senator Hassan has not introduced any specific litigation to address this issue. However, her highlighting of the issue to the ESRB, which recently reiterated that loot boxes are not gambling, may encourage additional industry response. Thus far, the ESRB replied only that

[a]s the industry evolves, so does our rating system, and we will continue to make enhancements to ensure parents continue to be well-informed. We will also continue to provide information about additional tools, including parental control guides, that help parents

131. See Kyle Orland, *The Legislative Fight over Loot Boxes Expands to Washington State*, ARS TECHNICA (Jan. 25, 2018, 10:05 AM), <https://arstechnica.com/gaming/2018/01/the-legislative-fight-over-loot-boxes-expands-to-washington-state/>.

132. See Kyle Orland, *Valve Refuses Government Request to Cut Off Steam Skin Trading*, ARS TECHNICA (Oct. 19, 2016, 10:44 AM), <https://arstechnica.com/gaming/2016/10/valve-pushes-back-against-government-threats-over-steam-skin-gambling/>.

133. See Robert Grosso, *Valve to Respond to Washington Gambling Commission After Given Deadline*, TECHRAPTOR (Oct. 17, 2016, 7:09 PM), <https://techraptor.net/content/valve-respond-washington-gambling-commission-given-deadline>.

134. See Cecilia D’Anastasio, *U.S. Senator Asks ESRB to Re-Examine Loot Boxes*, KOTAKU (Feb. 15, 2018, 5:20 PM), <https://kotaku.com/u-s-senator-asks-esrb-to-re-examine-loot-boxes-1823049616>.

set spending and time limits and block potentially inappropriate games based on the ESRB-assigned age rating.¹³⁵

C. CHINA—MANDATED ODDS PUBLISHING

China has passed legislation requiring, as of May 2017, the mandatory disclosure of loot box odds:

.6 . . . Online game publishers shall promptly publicly announce information about the name, property, content, quantity, and draw/forgo probability of all virtual items and services that can be drawn/forgo on the official website or a dedicated draw probability webpage of the game. The information on draw probability shall be true and effective.

.7 Online game publishers shall publicly announce the random draw results by customers on notable places of official website or in game, and keep record for government inquiry. The record must be kept for more than 90 days. When publishing the random draw results, some measures should be taken place to protect user privacy.¹³⁶

D. JAPAN—BAN OF MULTI-LAYERED LOOT BOXES

Loot box games or “gacha” are extremely popular in Japan. Japan has adopted a narrow law that outlaws “kompu gacha” in which players must attain a wide set of random items¹³⁷ in order to gain a “grand prize,” but other gacha mechanics have been undisturbed.¹³⁸ Kompu gacha ran afoul of Japanese lawmakers as the practice is targeted at children and “significantly

135. Senator Maggie Hassan, *Sen. Hassan Presses FTC Nominees on Student Loan Scams, Predatory Video Game “Loot Boxes”*, YOUTUBE, (Feb. 14, 2018), <https://www.youtube.com/watch?v=sc9VCJpm7qo>; see also Games News, *U.S. Senator Calls on ESRB to Mark Loot Box Games, Claims They Cause Addiction in Children*, ALTCHAR (Feb. 15, 2018, 2:27 PM), <https://www.altchar.com/games-news/558809/us-senator-calls-on-esrb-to-mark-loot-box-games-claims-they-cause-addiction-in-children>; Andy Chalk, *US Senator Calls on ESRB to Take Action on Loot Boxes, Suggests FTC Could Get Involved*, PCGAMER (Feb. 14, 2018), <https://www.pcgamer.com/us-senator-calls-on-esrb-to-take-action-on-loot-boxes-suggests-ftc-could-get-involved/>.

136. See Andy Chalk, *Chinese Law Will Force Game Makers to Reveal Loot Box Drop Rates*, PC GAMER (Dec. 8, 2016), <https://www.pcgamer.com/chinese-law-will-force-game-makers-to-reveal-loot-box-drop-rates/>.

137. Thereby increasing the number of loot box draws required to gain the prize.

138. See Kathleen De Vere, *Japan Officially Declares Lucrative Kompu Gacha Practice Illegal in Social Games*, ADWEEK (May 18, 2012) <http://www.adweek.com/digital/japan-officially-declares-lucrative-kompu-gacha-practice-illegal-in-social-games/>.

increase[s] the passion for gambling.”¹³⁹ For example, “[i]n one case, a boy in middle school racked up more than \$5,000 (400,000 yen) in charges in a single month. Another boy in elementary school was able to make \$1,500 (120,000 yen) in purchases in just three days.”¹⁴⁰

E. BELGIUM AND GERMANY—FALSE BANS AND REGULATORY REFERRALS

In November 2017, several game-focused websites reported that Belgium’s Gaming Commission had concluded loot boxes constituted a form of gambling.¹⁴¹ This was revealed to be false.¹⁴² While Belgium’s Justice Minister, Koen Geens, had expressed a desire to classify loot boxes as gambling, no official action was attendant to that comment.¹⁴³ The Commission authored an informative note on the matter, but no final decision has been taken.¹⁴⁴

A similar drama played out in Germany, where the USK (Unterhaltungssoftware Selbstkontrolle or Voluntary Monitoring Organization of Entertainment Software) was reported to be considering a ban of loot boxes; the USK then clarified that they “are actually examining regulations of online advertising and purchasing as a whole” but are not formally considering a ban.¹⁴⁵

139. *See id.*

140. Kathleen De Vere, *How Japan’s Social Game Regulations Will Impact GREE, DeNA and the U.S.*, ADWEEK (May 8, 2012), <http://www.adweek.com/digital/how-japans-social-game-regulations-will-impact-gree-dena-and-the-u-s/?red=im>.

141. *See* Adeline Louvigny, *No, Belgium Did Not Qualify Battlefront II Loot Boxes as a Game of Chance*, INFO (Nov. 22, 2017, 11:02 AM), https://translate.google.com/translate?sl=fr&tl=en&js=y&prev=_t&hl=en&ie=UTF-8&u=https%3A%2F%2Fwww.rtbef.be%2Finfo%2Fmedias%2Fdetail_non-la-belgique-n-a-pas-qualifie-star-wars-battlefront-ii-de-jeu-de-hasard%3Fid%3D9769751&edit-text=.

142. *See id.*

143. *See* Andy Chalk, *Belgium’s Justice Minister Calls for Loot Box Ban in Europe (Updated)*, PCGAMER (Nov. 22, 2017), <https://www.pcgamer.com/belgium-says-loot-boxes-are-gambling-wants-them-banned-in-europe/>.

144. *See id.*

145. *See* Andy Chalk, *Germany May Ban Loot Boxes (Updated)*, PCGAMER (Feb. 6, 2018), <https://www.pcgamer.com/germany-may-ban-loot-boxes/>.

F. NEW ZEALAND—REGULATOR COMMENT DENIES GAMBLING CONNECTION

New Zealand's gambling regulation agency, the Gambling Compliance office of its Department of Internal Affairs, noted that loot boxes do not meet the definition for gambling and are rather a game enhancement.¹⁴⁶ The Department of Internal Affairs said,

There are many games which enable the user to purchase additional items to enhance the gaming experience. Loot boxes are a variation on this theme. Gamers do not purchase loot boxes seeking to win money or something that can be converted into money. They buy loot boxes so that they can use their contents within the game and thereby have a better gaming experience.

While the payment of money for a loot box with the contents of which are determined by chance may appear to be gambling, the Department is of the view that loot boxes do not meet the legal definition of gambling. The Department therefore has no ability to regulate this activity under the Gambling Act 2003.¹⁴⁷

G. AUSTRALIA—CONTRADICTORY REGULATOR COMMENTS

Jarrold Wolfe, a strategic analyst in the Victorian regulators' compliance division, noted that loot boxes "constitute gambling by the definition of the Victorian Legislation."¹⁴⁸ However, the overseas nature of these services may render them outside the jurisdiction of Australian regulators.¹⁴⁹ Wolfe proposes that "[i]f these companies want to include significant elements of gambling in their products then perhaps we should work with

146. Katherine Cross, *New Zealand Says Lootboxes 'Do Not Meet the Legal Definition for Gambling'*, GAMASUTRA (Dec. 11, 2017), https://www.gamasutra.com/view/news/311463/New_Zealand_says_lootboxes_do_not_meet_the_legal_definition_for_gambling.php.

147. E-mail from Trish Millward, Manager Licensing Compliance Regulatory Services, The Dep't of Int'l Affairs Te Tari Taiwhenua, to Katherine Cross, Gamasutra (Dec. 11, 2017) (on file with recipient). A reproduction of the e-mail is available at *supra* note 146, https://www.gamasutra.com/view/news/311463/New_Zealand_says_lootboxes_do_not_meet_the_legal_definition_for_gambling.php.

148. Alex Walker, *Victoria's Gambling Regulator: Loot Boxes 'Constitute Gambling'*, KOTAKU (Nov. 22, 2017, 4:00 PM) (quoting Jarrod Wolfe), <https://www.kotaku.com.au/2017/11/victorias-gambling-regulator-loot-boxes-constitute-gambling/>.

149. *See id.*

‘The Australian Classification Board’ to ensure than any product that does that and monetises it gets an immediate R rating.”¹⁵⁰

However, Robert Grimmond, a regulator of legalized gambling in Queensland, contradicts this position.¹⁵¹ Though cautioning that he was “not in a position to definitively advise whether ‘loot boxes’ or similar video game features would constitute ‘gambling,’” Grimmond “confirm[ed] that video gaming which provides for ‘loot boxes’ would not fall within the meaning of a gaming machine as defined under the Gaming Machine Act.”¹⁵²

H. UK—DEPENDS ON EXISTENCE OF AFTERSALE MARKET

In response to a public petition, the Gambling Commission of the United Kingdom has taken a bifurcated approach to loot boxes and gambling.¹⁵³ The Commission’s approach turns on whether there is a clear aftermarket for loot; if no such market exists, the items will be considered worthless and would not implicate gambling, whereas the presence of an aftermarket would likely result in a finding of licensable gambling.¹⁵⁴ However, “[t]he government recognises the risks that come from increasing convergence between gambling and video games. The

150. *Id.*; see generally Marcus Carter, ‘Loot Boxes’ and Pay-To-Win Features in Games Look a Lot Like Gambling, AUSTRALIAN BROADCASTING CORP. (Nov. 28, 2017, 3:33 AM), <http://www.abc.net.au/news/2017-11-28/pay-to-win-gaming-features-look-like-gambling/9201386> (discussing the potentially significant problem surrounding loot boxes as well as possible solutions).

151. See Alex Walker, *Queensland’s Gambling Regulator Doesn’t Think Loot Boxes Are Gambling*, KOTAKU (Nov. 23, 2017, 11:00 AM), <https://www.kotaku.com.au/2017/11/queenslands-gambling-regulator-doesnt-think-loot-boxes-are-gambling/>.

152. *Id.*

153. See *Adapt Gambling Laws to Include Gambling in Video Games Which Targets Children*, U.K. GOV’T AND PARLIAMENT, https://petition.parliament.uk/petitions/201300?reveal_response=yes#response-threshold

154. See *id.* (“Where the facility exists for players of video games to purchase a key to unlock a bundle containing an unknown quantity and value of in-game items as a prize, and where there are readily accessible opportunities to cash in or exchange those awarded in-game items for money or money’s worth, then these elements of the game are likely to be considered licensable gambling activities. In contrast, where prizes are restricted for use solely within the game, such in-game features would not be licensable gambling. The Gambling Commission is committed to working with the video game industry to prevent gambling-related harm related to their platforms.”).

Gambling Commission is keeping this matter under review and will continue to monitor developments in the market.”¹⁵⁵

III. PROPOSAL: TRANSPARENCY THROUGH GRANULAR ODDS DISCLOSURE AND RATING LABELING

Increasing transparency offers the greatest opportunity to address the loot box issue without curtailing consumer’s rights or inviting overregulation of videogames. This essay proposes a two-prong solution. First, developers should be required to publish granular odds for all loot box items. Second, the federal regulator should require that the ESRB label loot box games as Mature.

A. PRONG 1: ODDS FOR ALL ITEMS OFFERED

Defenders of loot boxes often analogize the practice to baseball cards and collectible card games.¹⁵⁶ However, the analogy ignores the fact that tangible card manufacturers routinely report the odds of rare finds.¹⁵⁷ These odds were of course constrained by the fact that the probability of finding particular categories of cards was stated in terms of the entire run: the packs with those cards may have already been opened by the time the consumer purchased his or her own pack.¹⁵⁸ For this reason, “advertised odds are an average for the entire production run and are not guaranteed within an individual pack or box.”¹⁵⁹ Loot box designers have no such constraints.

Moreover, game designers may easily shift odds in ways that are simply unavailable to mass scale printers. As demonstrated by the Activision patent, game designers may manipulate the consumer with detailed adjustments to rewards,

155. *Id.* See generally Vic Hood, *The Big Interview: The Gambling Commission on Loot Boxes*, EUROGAMER (Dec. 14, 2017), <http://www.eurogamer.net/articles/2017-12-14-the-big-interview-the-gambling-commission-on-loot-boxes> (discussing the debate surrounding loot boxes in the United Kingdom).

156. See Schreier, *supra* note 98; See also Tyler Wilde, *Loot Boxes are Bad, but New Legislation Could be Worse*, PCGAMER (Nov. 28, 2017), <https://www.pcgamer.com/loot-boxes-are-bad-but-new-legislation-could-be-worse/> (analogizing loot boxes to collectible cards).

157. See *Chaset v. Fleer/Skybox Int’l, LP*, 300 F.3d 1083, 1086 (9th Cir. 2002).

158. See *id.*

159. *Id.*

multiplayer matches, and group acclaim.¹⁶⁰ Accordingly, federal law should require designers to disclose odds *for each loot box item* and empower auditors to check code to ensure those odds are followed.¹⁶¹ Such a requirement would mirror state laws that require “[i]f more than one prize is offered, the odds shall be separately stated for each prize.”¹⁶² This approach is similar to what Hawaii is pursuing in House Bill 2727 and Senate Bill 3025.¹⁶³

B. PRONG 2: PRESSURE ESRB TO LABEL LOOT BOX CONTENT AS MATURE

The ESRB was formed to prevent federal review of violent content in video games. Current “Mature” rated games are described as “[c]ontent [that] is generally suitable for ages 17 and up. May contain intense violence, blood and gore, sexual content and/or strong language.”¹⁶⁴ The ESRB should expand this category to include games with loot box mechanics.

The inclusion of loot boxes need not dilute the meaning of the “M” rating because game ratings are accompanied by content descriptors, noting the primary reasons for the rating.¹⁶⁵ While the ESRB does have gambling related descriptors—e.g., “Simulated Gambling - Player can gamble without betting or wagering real cash or currency” and “Real Gambling - Player can gamble, including betting or wagering real cash or currency”—these are typically applied to Casino games, not games including loot box mechanics.¹⁶⁶ The ESRB should incorporate a “Loot Box”

160. See U.S. Patent No. 9,789,406, *supra* note 57.

161. As the games at issue are delivered over the Internet, jurisdiction is assumed. Moreover, the change to any one state’s gaming law to target this issue would likely force national change due to the interconnected markets. If a state such as California changed its laws, game makers would treat the regulatory scheme as national. Because there would be little functional difference between these approaches, this essay assumes a federal approach.

162. CAL. BUS. & PROF. CODE § 17539.5. See also KAN. CONST. art. 15, § 3c (“The state shall whenever possible provide the public information on the odds of winning a prize or prizes in a lottery game.”).

163. See H.B. 2727, 29th Leg., Reg. Sess. (Haw. 2018); S.B. 3025, 29th Leg., Reg. Sess. (Haw. 2018).

164. *ESRB Ratings Guide*, ENTERTAINMENT SOFTWARE RATING BOARD, https://www.esrb.org/ratings/ratings_guide.aspx.

165. See *id.*

166. *Id.*

descriptor “Loot Box – Player can use real cash or currency to acquire random in-game items, features, or attributes.”

Though the ESRB is not a regulatory agency, regulatory pressure will lead to predictable results. Should the ESRB feel that federal intervention was likely against loot box content on the grounds, not that the practice constituted gambling, but that it helped facilitate poor impulse control and addictive behavior in children, the ESRB would likely label loot box games as Mature.¹⁶⁷ Such labeling would allow retailers, parents, and end users to determine their approach to games containing a loot box mechanic.¹⁶⁸ This approach would respect and facilitate informed consumer choice.¹⁶⁹

C. ADVANTAGES OF PROPOSAL

1. Increasing Consumer Information

The transparency approach outlined above would provide users with information as to what games contain loot box mechanics and information as to the odds attendant to those mechanics. Increasing consumer information has been the regulatory drumbeat for nearly fifty years across a variety of products related to a wide field of practices.¹⁷⁰ As astute game reviewers have noted, the hidden nature of microtransactions and loot box odds currently prevents consumers from deciding

167. See *generally About ESRB*, ENTERTAINMENT SOFTWARE RATING BOARD, <http://www.esrb.org/about/> (“[ESRB’s mission is] [t]o empower consumers, especially parents, with guidance that allows them to make informed decisions about the age-appropriateness and suitability of video games and apps while holding the video game industry accountable for responsible marketing practices.”).

168. See *id.*

169. See *id.*

170. See, e.g., *Be an Informed Consumer*, NAT’L CTR. FOR COMPLEMENTARY AND INTEGRATIVE HEALTH, <https://nccih.nih.gov/health/decisions> (urging individuals to be informed consumers); John F. Kennedy, 35th President of the U.S., Special Message to the Congress on Protecting the Consumer Interest (Mar. 15, 1962) (recognizing the right to be informed); The Lisbon Treaty art. 169, Dec. 13, 2007, 51 O.J. C 115 (“In order to promote the interests of consumers and to ensure a high level of consumer protection, the Union shall contribute to protecting the health, safety and economic interests of consumers, as well as to promoting their right to information, education and to organise themselves in order to safeguard their interests.”).

whether a game is, in fact, a good deal.¹⁷¹ The benefits of informed consumers may lead to better reasoned purchases, avoidance of “unfair” loot box games, and market competition between loot box designers.¹⁷²

2. Educational Opportunity

The educational aspects of game playing are well documented and adding greater probability transparency to games may present a boon for mathematics education.¹⁷³ Numerous educators and psychologists have remarked on harnessing children’s natural attraction to gambling as a means to teach probability and critical thinking skills.¹⁷⁴ For example, the Cambridge Health Alliance hosts a curriculum focused on gambling called “Facing the Odds: The Mathematics of Gambling and Other Risks.”¹⁷⁵ The greater publication of odds may help spark gamer interest in the subject while simultaneously dispelling some of the risk-taking fallacies that encourage pathological gambling.

171. See Trevor Ruben, *Why Microtransaction and Loot Boxes Are Destroying Games*, ROLLING STONE (Oct. 13, 2017), <https://www.rollingstone.com/glixel/features/theres-no-such-thing-as-a-good-loot-box-or-microtransaction-w508742> (“Microtransactions hurt the entire industry by bending to breakage the one thing that every market needs: honest, comparative judgment between products.”).

172. See *id.*

173. See Andrew Moshirnia & Maya Israel, *The Educational Efficacy of Distinct Information Delivery Systems in Modified Video Games*, 21 J. OF INTERACTIVE LEARNING RES. 383 (2010) (discussing the educational efficacy of video games).

174. See, e.g., Jill Cueni-Cohen, *Students Learn Math, and Life, Lessons Through Gambling*, PITTSBURGH POST GAZETTE (Apr. 17, 2014, 6:13 AM), <http://www.post-gazette.com/local/north/2014/04/17/Students-learn-math-and-life-lessons-through-gambling/stories/201404170029>; Amy Cowen, *Probability and Playing Cards: Hands-on Family Math*, SCIENCE BUDDIES (Sept. 27, 2013, 6:00 AM), <https://www.sciencebuddies.org/blog/probability-and-playing-cards-hands-on-family-math>; Ed Feng, *How to Get Your Child to Love Math*, MEDIUM (July 28, 2016), <https://medium.com/age-of-awareness/how-to-get-your-child-to-love-math-e1f44048dbd1> (“Blackjack was the best math tool.”)

175. See Division on Addiction, *Facing the Odds: The Mathematics of Gambling and Other Risks*, CAMBRIDGE HEALTH ALLIANCE, http://www.divisiononaddiction.org/curr/facing_the_odds.htm.

3. Avoiding an Outright Ban

The proposal also avoids an outright ban of the loot box mechanic in any game sold to minors. A ban would likely harm developers and also deny access to those users who enjoy the occasional sampling of this mechanic. More importantly, eschewing a prohibition approach is vital in the case of video games, which serve as a boogeyman for any number of social ills and a convenient political target.¹⁷⁶

A gambling-focused ban could open the floodgates for overregulation of video game content. Indeed, a total ban is the archetypical response of uninformed regulators.¹⁷⁷ For example, video games are routinely blamed for school shootings.¹⁷⁸ Politicians singled out video games as the likely cause for school shootings in Stoneman Douglas,¹⁷⁹ Sandy Hook,¹⁸⁰ and Virginia Tech¹⁸¹ amongst others, arguably as a means to avoid discussion of gun control.¹⁸² The consequence of this displacement is a rash

176. See Adam Rosenberg, *Gaming's Loot Box Controversy Just Took a Dangerous New Turn*, MASHABLE (Nov. 22, 2017, 10:41 PM), <https://mashable.com/2017/11/22/ea-star-wars-battlefront-loot-box-gambling/#UD0ZdJ0oFiqg> (arguing that legislation could trigger a rush for greater censorship in gaming).

177. *Id.*

178. Jesse Singal, *Psychologists: Stop Blaming Mass Shootings on Video Games*, THE CUT (May 12, 2017), <https://www.thecut.com/2017/05/psychologists-stop-blaming-mass-shootings-on-video-games.html>.

179. Stefanie Fogel, *Kentucky Governor Blames Video Games for Florida School Shooting*, MSN (Feb. 15, 2018) <https://www.msn.com/en-us/news/us/kentucky-governor-blames-video-games-for-florida-school-shooting/ar-BBJc6G2>; Erik Kain, *Trump Blames Violent Video Games For School Shootings—Here's Why He's Wrong*, FORBES (Feb. 22, 2018, 2:51 PM), <https://www.forbes.com/sites/erikkain/2018/02/22/trump-blames-violent-video-games-for-school-shootings-heres-why-hes-wrong/#775495cd67f3>.

180. Christopher J. Ferguson, *Sandy Hook Shooting: Video Games Blamed, Again*, TIME (Dec. 20, 2012), <http://ideas.time.com/2012/12/20/sandy-hook-shooting-video-games-blamed-again/>.

181. Winda Benedetti, *Were video games to blame for the massacre*, NBCNEWS (Apr. 20, 2007, 10:05 PM), http://www.nbcnews.com/id/18220228/ns/technology_and_science-games/t/were-video-games-blame-massacre/.

182. Ben Kuchera, *I can't believe we're still blaming video games in 2018*, POLYGON (Feb. 20, 2018, 2:22 PM), <https://www.polygon.com/2018/2/20/17031864/gun-violence-video-games>. This phenomenon is not limited to the United States. Officials in Germany recently blamed a shooting rampage on video games; *see also*, Souad Mekhennet, Griff

of legislation as the state and federal level aimed at banning violence in video games able to be purchased by minors.¹⁸³ While such legislation has been ruled unconstitutional, it is likely that a successful loot box ban would encourage further attempts to censor digital creativity and harm game development.¹⁸⁴

IV. CRITICISMS AND AREAS FOR FURTHER STUDY

One criticism to the above proposal is that the mere disclosure of odds will not discourage gambling. The criticism has some merit as there are numerous studies showing that probability is not intuitive and the mere provision of odds may not diminish gambling.¹⁸⁵ Indeed, the prevalence of gambling, in the face of prohibitive odds, supports the notion that the odds are not well understood.

However, the criticism ignores the fact that the furnishing of statistics will allow for the possibility of reasonable assessment, while the current regime bars such assessment entirely. Moreover, game players frequently delve into complex formulae in order to arrive at a competitive advantage.¹⁸⁶ It is

Witte and William Booth, *Munich officials: Gunman acted like 'a deranged person' but had no ties to terror groups*, WASH. POST (July 23, 2016), https://www.washingtonpost.com/world/munich-police-hunt-for-a-motive-after-iranian-german-gunman-kills-nine-in-rampage/2016/07/23/5e3058d6-5055-11e6-bf27-405106836f96_story.html?utm_term=.b24525aa21a1 (explaining that the German Interior Minister Thomas de Maizière believed that “violent video games had probably helped inspire the attack”).

183. Bredan Sasso and Pete Kasperowicz, *Dem lawmaker introduces bill to ban sales of violent video games to minors*, THE HILL (Jan. 17, 2013, 5:45 PM), <http://thehill.com/policy/technology/277781-dem-bill-would-ban-sale-of-violent-games-to-minors>; *Brown v. Entm't Merchants Ass'n*, 564 U.S. 786 (2011).

184. Andrew Moshirnia, *A Tale of Two Breyers*, DIGITAL MEDIA LAW PROJECT (Jun. 28, 2011), <http://www.dmlp.org/blog/2011/tale-two-breyers>.

185. See Williams, R. J., & Connolly, D., *Does learning about the mathematics of gambling change gambling behavior?* 20 PSYCHOL. OF ADDICTIVE BEHAV. 1, 62–68 (2006). See also Robert Williams et al., PREVENTION OF PROBLEM GAMBLING: A Comprehensive Review of the Evidence and Identified Best Practices 1, 21–24 (2012), <https://www.uleth.ca/dspace/bitstream/handle/10133/3121/2012-prevention-opgrc.pdf?sequence=3> (collecting various studies showing variable long-term impact on gambling education campaigns on gambling prevalence).

186. Walkthroughs and other game guides provide a truly staggering amount of information regarding stats growth and other algorithms for a wide variety of games. See GAME FAQs, <https://gamefaqs.gamespot.com/> (last visited Nov. 19, 2018) (Walkthroughs and other statistical breakdowns are accessed by selecting a game and then the FAQ tab.)

not unreasonable to assume they may similarly engage with loot box probabilities if given the appropriate data.

Another likely criticism is that labeling alone will not provide a sufficient obstacle for purchases of loot box games by minors. Retailers may stock the game and sell to minors,¹⁸⁷ and unaware parents may disregard the rating, especially if the underlying game content seems non-violent.¹⁸⁸

As with any rating system, there exists the possibility that ratings will be gamed or ignored. However, the provision of greater information to parents is generally considered in the public interest. While a total ban would likely prevent more minors from accessing loot box games, such a ban would occasion much greater legal push-back from developers, may not be feasible, and would open the floodgates to politically-opportune overregulation.¹⁸⁹

This essay is the first survey of this novel problem. As such, further study must be conducted on the impact of loot box mechanics on game players. Moreover, it remains to be seen if consumer reaction may force additional changes to game development practices absent regulatory intervention. Lastly, the pending actions of state actors must be observed and evaluated.

V. CONCLUSION

Loot boxes threaten to degrade game design and to foist addictive mechanics on vulnerable users. Consumer displeasure with loot boxes has not prevented the spread of the device. It is natural to seek a legal response to a practice that results in some users spending thousands of dollars and contemplating suicide when facing the shame of their actions. However, gambling laws

187. This fear is largely overblown. See FED. TRADE COMMISSION, *FTC Undercover Shopper Survey on Entertainment Ratings Enforcement Finds Compliance Highest Among Video Game Sellers and Movie Theaters* (2013), <https://www.ftc.gov/news-events/press-releases/2013/03/ftc-undercover-shopper-survey-entertainment-ratings-enforcement>.

188. Katie Cox, *Two-Thirds of Parents Admit They Don't Bother Checking Video Game Age Ratings*, KOTAKU (April 13, 2012, 11:30 AM), <https://kotaku.com/5901395/two-thirds-of-parents-admit-they-don't-bother-checking-video-game-age-ratings>; Louise Egan, *Video Game Content Ratings: Does Anyone Care Anymore?*, THE ARTIFACE (Jan. 9, 2014), <https://the-artifice.com/video-game-content-ratings-anyone-care-anymore/>.

189. Kain, *supra* note 179.

are a poor fit for virtual items that are simultaneously precious and worthless.

While loot boxes may not constitute gambling, the opaque nature of loot box odds is troubling and warrants intervention. At the same time, an outright ban of the device should be avoided, if only to prevent the predictable rush to overregulate video games by inimical political actors. Greater transparency may help consumers decide if they wish to purchase games involving loot boxes. Even if loot boxes persist, better knowledge of odds may convince game players that they are better off just taking their chances with the dragon.